

**Abstract**

Intravenous, or indwelling, or integrated multi-functional devices and systems reduce levels of a targeted compound in blood by selective adsorption. The devices and systems can be used, e.g., to reduce levels of pro-inflammatory or anti-inflammatory stimulators or mediators in blood by selective adsorption. The devices and systems are useful in situations where abnormal levels of or unregulated or excessive interaction among pro-inflammatory or anti-inflammatory stimulators or mediators occur, or during events that do induce or have the potential for inducing abnormal production of pro-inflammatory or anti-inflammatory stimulators or mediators. The devices and systems serve to prevent, control, reduce, or alleviate the severity of the inflammatory response and disease states that are associated with abnormal levels of or unregulated or excessive interaction among pro-inflammatory or anti-inflammatory stimulators or mediators.